NIKOL'SKIY, G.V.; VERIGIN, B.V.; KLYUCHAREVA, O.A.

Fishery management in the middle and upper Amur Basin in connection with the planned hydraulic construction work. Zool.zhur. 39 no.3: 407-416 '60. (MIRA 13:6)

1. Chair of Ichthyology, and Agrobiological Station of the Moscow State University.
(Amur River--Fisheries--Research)

KLYUCHARIVA, O.A.

Nutrition of benthophagous fishes in Rybinsk Reservoir. Trudy DOZ no.6:159-251 '60. (MIRA 13:10)
(Rybinsk Reservoir--Fishes--Food) (Benthos)

KLYUCHAREVA, O.A.

Summer feeding of the young-of-the-year roach and bream in Rybinsk Reservoir. Trudy DGS no.6:335-343 '60. (MIRA 13:10)
(Rybinsk Reservoir--Roach (Fish))
(Rybinsk Reservoir--Bream) (Fishes--Food)

KLYUCHAREVA, O.A.

Descent and diurnal vertical migrations of bottom invertebrates in the Amur River. Vop. ekol. 5:97-98 '62. (MIRA 16:6)

1. Moskovskiy gosudarstvennyy universitet.
(Amur River--Invertebrates)

KLYUCHAREVA, O.A.

Downstream and diurnal vertical migrations of benthic invertebrates in the Amur River. Zool. zhur. 42 no.11:1601-1612 '63. (MIRA 17:2)

1. Department of Ichthyology, State University of Moscow.

KLYUCHAREVA, O.A., red.

[Lakes of southern Sakhalin and their ichthyofauna]
Ozera iuzhnogo Sakhalina i ikh ikhtiofauna. Moskva,
Izd-vo Mosk. univ., 1964. 265 p. (MIRA 18:1)

1. Moscow. Universitet. Biologo-pochvennyy fakul'tet.

KLYUCHAREVA, O.A.

Materials on the ichthyofauna in lakes of southern Sakhalin.
Biul. MOIP. Otd. biol. 70 no.6:40-49 N-D '65
(MIRA 19:1)

KLYUCHAREVA, S.G., aspirant

Diagnostic importance of determing the protein fractions and sialic acid in "pulseless diseases". Kaz.med.zhur. no.3:55-57 My-Je '62. (MIRA 15:9)

1. Kafedra fakul'tetskoy terapii (zav. - prof. Z.I.Malkin) Kazanskogo meditsinskogo instituta.
(BLOOD PROTEINS) (NEURAMINIC ACID) (PULSE)

KLYUCHAREVA, S.G.

First experience in certifying the physicians of the Tatar A.S.S.R. Kas.med.zhur. no.1:74-76 Ja-F'63. (MIRA 16:8)

1. Glavnyy terapevt Ministerstva zdravookhraneniya Tatarskoy SSSR.

(TATAR A.S.S.R.—PHYSICIANS)

MALKIN, Z.I.; SHCHERBATENKO, S.I.; BEREZOVSKIY, B.S.; KLYUCHAREVA, S.G.; SALAMATINA, V.V. (Kazan')

Therapeutic tactics in the treatment of rheumatic endomyocarditis and myocarditis. Vop.revm. 1 no.2:44-48 Ap-Je '61. (MIRA 16:4)

(RHEUMATIC HEART DISEASE)

KLYUCHAREVA, T. YE.

USSR / Microbiology. Sanitary Microbiology. Microbiology of Food Products.

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5520.

Author : Klyuchareva, T. Ye., Polyakova, A. S.; Yesikova, N. S.

Inst : Not given.

Title : On the Suitability of the Method of Agglutination on Glass (Huddleson Reaction) for Determination of the Contamination of Milk Products.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiologii, 1957, No 9, 30.

Abstract: Tests were carried out with fermentation of milk samples with a negative Huddleson reaction to establish the relationship between a positive agglutination reaction and the degree of acidity of dairy products. All the samples pro-

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KlyucHAREVA, T. Ye.

YANISHEVSKAYA, M.N.; DUBOVITSKAYA, N.K.; KLYUCHAREVA, T.Ye.; MITRIKOVA, [illegible]; PEKSHEVA, M.N.; SAMOYLOVA, Z.Ye.; TYUNEYEVA, G.A.

Difficulties in diagnosing some atypical dysenterial bacteria. Med. zhur. Uzb. no.2:20-22 F '62. (MIRA 15:4)

1. Iz kafedry mikrobiologii (zav. - prof. P.F.Samsonov) Tashkentskogo gosudarstvennogo meditsinskogo instituta i laboratoriy gorodskoy i rayonnykh sanitarno-epidemiologicheskikh stantsiy Tashkenta.
(SHIGELLA) (DYSENTERY)

AKHMEDOV, N.A.; KIKNEHAREVA, T.Ye.; SAMSONOV, P.F.; YANYSHEVSKAYA, M.N.

Specific phages in the diagnosis of bacterial dysentery. Report No.1. Nauch.trudy uch.i prak.vrach.Uzb. no.31:151-157 '62. (MIRA 16:2)

1. Iz kafedry mikrobiologii Tashkentskogo gosudarstvennogo meditsinskogo instituta (zav. - prof. P.F. Samsonov) i Oblastnoy sanitarno-epidemiologicheskoy stantsii Tashkenta (zav. S.I. Rydel'nant).
(DYSENTERY) (BACTERIOPHAGE)

AKHMEDOV, N.A.; KLYUCHAREVA, T.Ye.

Identification of Schmitz-Stutzer's and Flexner's dysenteric bacteria by the use of bacteriophage. Report No.2. Nauch.trudy uch.i prak.vrach.Usb. no.3:158-162 '62. (MIRA 16:2)

1. Iz kafedry mikrobiologii Tashkentskogo gosudarstvennogo meditsinskogo instituta (zav. - zasluzhennyy deyatel' nauki, prof. P.F. Semsonov) i bakteriologicheskoy laboratorii oblastnoy sanitarno-epidemiologicheskoy stantsii Tashkentskogo oblastnogo otdela zdravookhraneniya (zav. - S.I. Rydel'nant).
(BACTERIOPHAGE) (SHIGELLA)

DEYCHMAN, G.I.; KLYUCHAREVA, T.Ye.

Prevention of tumors in hamsters infected with the SV40 virus. Vest. AMN SSSR 19 no.6:72-75 '64. (MIRA 18:4)

1. Muzey opukholerodnykh virusov Instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR, Moskva.

PONOMAREVA, Ye. D., dotsent; KLYUCHAREVA, Ye. A.; MAKAROVA, K. A.; RUSSEN, Ye. V.

So-called osteoblastic forms of metastatic cancer. Terap. 34 no.1:100-105 '62. (MIRA 15:7)

1. Iz 4-y kafedry terapii (zav. - chlen-korrespondent AMN SSSR prof. P. I. Yegorov) Tsentral'nogo instituta usovershenstvovaniya vrachey na base Tsentral'noy klinicheskoy bol'nitsy.

(BONES—CANCER)

RABUKHIN, A.Ye.; KLYUCHAREVA, Ye.A.; KULAKOVA, A.A.; LAMBINA, A.G.; MEDVEDEVA, A.S.; MEFEDOV, N.P.; RODIONOVA, T.V.; SAFAROV, R.S.; SEMINA, A.M.; YAKOVLEVA, T.A.

Clinical and epidemiological characteristics of tuberculosis in elderly persons. Trudy TSIU 63:14-19 '63. (MIRA 17:9)

1. Kafedra tuberkuleza TSentral'nogo instituta usovershenstvovaniya vrachey.

RABUKHIN, A.Ye.; KLYUCHAREVA, Ye.A.; LAMBINA, A.G.; MEDVEDEVA, A.S.; NEFEDOV, A.F.; RODIONOVA, T.V.; SEMICHA, A.M.; YAKOVLEVA, T.A. (Moskva)

Tuberculosis of the lungs in old age. Klin. med. 40 no.12: 18-23 D '62. (MIRA 17:2)

1. Iz TSentral'nogo instituta usovershenstvovaniya vrachey.

BEL'KEVICH, V.I.; SVIDKOVSKAYA, N.F.; BELETSKIY, Ye.L.; DOBRINA, S.K.; KLYUCHAREVA, Z.S.

Effect of ultrasonic vibrations on biological microscopic preparations. Trudy VNIIMIO no.3:55-61 '63 (MIRA 18:2)

KLYUCHAREVSKIY, K.

A third of a century on watch. Voen. znan. 41 no.9:14-15 S '65. (MIRA 18:10)

R

Kirsanov, Ya. V. Information on some American refractory brick. The cements. Trans. Cent. Research Inst. (U.S.S.R.), No. 44, 40 pp. (1933). — A series of American refractory brick and cements was analyzed, subjected to various tests, and compared with similar products made of Russian raw materials. The researches show the possibility of replacing American refractories by refractory products manufactured in Russia.

PROCESSES AND PROPERTIES INDEX

Fused magnesite as a refractory material. Ya. V. Kiselev. (Огнеупоры 2, No. 4, 4-10(1934); Chem. Zbl. 1935, I, 708 9.—The possibility of using fused magnesite instead of ordinary magnesite as a raw material for magnesite brick for elec. furnaces was investigated. A series of mixts. composed of fused magnesite and quartz in varying amts. was tested. Water glass, Sorel cement or wet-ground fused magnesite served as binding agents. Bricks were pressed at 400 700 kg./sq. cm., dried in air and then burned at about 1400°. The bricks made without water glass and with only wet-ground magnesite were superior, especially in refractoriness. Practical tests showed them to have about 3 times the durability of brick made from ordinary magnesite. The different products of varying m. pt. formed in the elec. furnace during the fusion of the magnesite are of equal value for the manuf. of brick. M. G. Moore

METALLURGICAL LITERATURE CLASSIFICATION

KLYUCHAROV, Ya. V.

Klyucharov, Ya. V. Siemenzite. Огнеупоры. 3 [illegible]

[illegible] Investigation of four samples of cast and pressed Siemenzite disclosed a higher content of metallic iron in the latter; the mineralogical composition was the same for both (spinel 83.6, opaque mineral 11.1, glass 2.3, pores 3.0%); the specific weight differed (3.98 for cast Siemenzite, 3.70 for the pressed sample); the porosity of the former was much lower (1.17 against 15.65 to 15.74); the temperature of the beginning of shrinkage under load of pressed Siemenzite (1540°) was lower than data found in the literature concerning the cast variety (1[illegible]°). The resistance to spalling was not high (6 coolings).

Dyakonov, Ya. V. Fused magnesite, its use as a refractory. Vysoko-Vysoko. Nauchno-issled. Inst Keram., No. 67, 72 pp. (1936). Ogneupory, 2, 6-10 (1934). — Mixes of fused magnesite and quartz (ferrite), unfired mixes, and mixes of fused magnesite with a fused magnesite based, water glass, and fired cement were studied. The bricks were fired to 1300 and 1610°C. Comparative tests with dead burned magnesite brick showed that fused magnesite brick withstood from 14 to 27 chilling tests, while the former averaged only 5 chilling tests. Magnesite-silica brick showed no softening at 1750° under a load of 2 kg./sq. cm.

KLYUCHAROV, Ya. V.

Klyucharov, Ya. V., and [illegible] S. A. [illegible] (1938). -- Tests were made with artificial Al_2O_3, andalusite, and kyanite, with different grog and binding materials.

R

Ryzhkov, Ya. V. MATERIALS WITH HIGH ALUMINA CONTENT—THERMOMECHANICAL PROPERTIES (Ogneupory, 4 [12] 782-91 (1939)).—Aluminous materials vary little in humidity, except those which are plastic and have a high water content. Apparent porosity and water absorption, however, vary greatly. Products of low porosity are those obtained from ordinary andalusite containing quartz and mica. Porosity and true porosity may be increased by grog additions from andalusite or alumina. Preforing of raw andalusite greatly increases the number of open pores. Aluminous materials may be classified in order of increasing mechanical resistance as follows: materials containing (1) a pure andalusite base, (2) a corundum and andalusite base, (3) kyanite, silite, and alumina, and (4) a raw andalusite base. The latter show the lowest thermal resistance.

KLYUCHAREV, Ya. V.

Klyucharev, Ya. V., and Lyubashin, S. A. Uchenye [illegible] Leningr. Tekhnol. Inst. Ogneupor. [illegible] No. 13, 3-1 (1958).--To obtain products of sufficient density and mechanical strength, well-fired magnesite containing not less than 90% MgO and not more than 2% CaO should be used. To lower shrinkage and raise the resistance to pressure under load at high temperatures, about 25% chromite must be added. For greater density and durability as well as lower shrinkage, grains of magnesite not coarser than 1 mm. and of chromite, 2 to 3 mm., should be used. Two types of bonding material are necessary: (1) an organic and (2) a ceramic bond containing 30% clay and 30% natural borate.

19

Refractory dunite mass. Ya. Y. Klyucharev and A. G. Marente. *Trudy Uralvuz. Tsv. Chelyabinsk* 1939, No. 18, 32-38; *Chem. Zent.* 1940, I, 2366.—Expts. are reported on the manuf. of dunite from Ural dunite for use as lining material for Martin furnaces. The dunite used as raw material contained SiO_2 38.05, TiO_2 0.16, Al_2O_3 0.21, Fe_2O_3 3.46, FeO 8.72, MgO 48.12, CO 0.60, K_2O 0.30, Na_2O 0.30, Cr_2O_3 0.30, MnO 0.13 and ignition loss 9.86%. Mineralogically it consisted of 38% olivine and 54% serpentine. The use of the following mixts. gave good refractories with high resistance to the attacks of both acid and basic slags: (1) dunite 88, magnesite 10 and clay 2%; (2) dunite 84, magnesite 15 and clay 1%; (3) dunite 75 and magnesite 24%. To obtain lower porosity and greater mech. strength than that obtained from the above mixts., the following is recommended: dunite 64, magnesite 15, chromite 20 and clay 1%. M. G. Moore

A10-1L4 METALLURGICAL LITERATURE CLASSIFICATION

PROPERTIES AND PROPERTIES OF

Kyanite refractories from Kalrak flotation concentrate.
Y. V. Kuvshinov. Ogneupory, 10 [9-10] 15-27 (1945).—The kyanite concentrate analyzes SiO_2 41.16, TiO_2 0.86, Al_2O_3 55.46, Fe_2O_3 0.82, and $K_2O + Na_2O$ 0.30%, and has a sp. gr. of 3.473 and a refractoriness of 1580°. Laboratory and semiplant tests show that the concentrate can be used without any prior firing provided the kyanite content is 50 to 70% and the firing follows the curve that takes into account the volume changes of the mineral during its heating in the interval 1250° to 1450° (in particular from 1300° to 1400°). Replacement of part of the binding clay with washed kaolin had a beneficial effect on the stability of the products under load at high temperatures. The heat stability was only moderate when the concentrate had noticeable amounts of free quartz. By substituting ground briquettes (70% kyanite concentrate +30% clay) for the concentrate, it is possible to reduce the porosity of the products to 22 to 25% without difficulty. The briquettes should be fired at temperatures not lower than 1500°, preferably 1600°, and should be ground to 3 mm. B.Z.K.

C

ALUMINUM METALLURGICAL LITERATURE CLASSIFICATION

KLYUCHAREV, Ya. V.

Kyanite flotation concentrate as a ceramic raw material. Ya. V. Klyucharev. *Keram. Sbornik*, No. 17, pp. 46-50 (1947).—A review of the literature is followed by some experimental data obtained by K. with kyanite flotation concentrate. Quality concentrate should contain not less than 58% alumina and not over 0% alkali; refractoriness should be not lower than 1810° to 1820° and specific gravity not less than 3.48. The last two figures can be used to evaluate the concentrate without resorting to chemical analysis except to determine loss on ignition. Ignition loss serves as an index of the mica content and should not exceed 1%. The concentrate should be dehydrated as much as possible for the preparation of semi-dry batches. 37 references. Cf. *Ceram. Abstracts*, 1948, Feb., p. 30f. P.Z.K.

KLYUCHAROV, Ya. V., doktor tekhnicheskikh nauk.

Forsterite refractories based on olivenites. Trudy GIPROTSEMENT 13:22-48 '50. (Refractory materials--Testing) (MIRA 10:4)

1. KLYUCHAROV, YA. V., Prof.; IL'IN, N. V., Eng.

2. USSR 600

4. Refractory Materials

7. Wear of chrome-magnesite refractories in the burning zone of rotary kilns, TSement, 18, No. 6, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

15-57-4-4656

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4, p 95 (USSR)

AUTHORS: Klyucharov, Ya. V., Il'ina, N. V., Mikhaylova, N. K.

TITLE: Alteration of the Phase Composition and the Technical Properties of the Nonfired Chrome-Magnesite Refractory Material Used in a Rotary Cement Kiln (Izmeneniye fazovogo sostava i tekhnicheskikh svoystv bezobzhigovogo khromomagnezitovogo ogneupora pri sluzhbe v tsementnoy vrashchayushcheysya pechi)

PERIODICAL: Tr. Gos. Vses. in-t po proyektir. i nauch-issled. rabotam v tsement. prom-sti, 1956, Nr 19, pp 54-66.

ABSTRACT: Bibliographic entry

Card 1/1

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723310008-7"

SOV/137-59-1-58

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 8 (USSR)

AUTHORS: Klyucharov, Ya. V., Mikhaylova, N. K.

TITLE: Thermal Expansion of Lining Materials in the Sintering Zone of Rotary Cement Kilns (Teplovoye rasshireniye futerovochnykh materialov zon spekaniya tsementnykh vrashchayushchikhsya pechey)

PERIODICAL: Tr. Gos. Vses. in-t po proyektir. i nauchno-issled. rabotam v tsementn. prom-sti, 1958, Nr 20, pp 31-45

ABSTRACT: Experimental work was carried out on the determination of thermal expansion (E) of chrome-magnesite brick (CB) KhM-4 and of mortars of various composition. Two types of blocks for model brickwork were used, namely, blocks 20x20x23 and 20x20x24-mm size, sawed out of CB and joined with 3-mm mortar seams. Fresh mortar was prepared from magnesite, chrome-magenesite, and caustic magnesite which were mixed with sintering additives (metal filings or pyrite cinders); the grain-size composition of the mixture was variable. Experiments were also conducted in replacing mortar with metal plates (2 mm). Mortar burned at 1450°C and unburned mortars were tested. The following conclusions were drawn on the

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SOV/137-59-1-58

Thermal Expansion of Lining Materials in the Sintering Zone of Rotary Cement Kilns

basis of the experiments: Thermal E of magnesite and chrome-magnesite mortars with filing added exceeds the E of CB, whereas E of mortar with addition of pyrite cinders at >1250° is lower than of brick, which partially compensates the free E of the brick. When metal plates are used the thermal E of the brickwork is only slightly different from the E of CB. Changes in the linear dimensions of magnesite and chrome-magnesite mortars after service in rotary kiln are related to the change in the phase composition of the seam. In the cold zones of the lining heated to 500 - 600°C the mortar changes but little in volume; above 500 - 600° thermal E sharply increases (attaining 5%), more especially with elevated Fe oxide content in the mortar; in the hot areas the E of the mortar attains 1.6 - 2.2%; at >1200 - 1300° temperatures the mortar begins to contract, compensating for the expansion of the CB. Thermal E of the Podolskiy-plant mortar made of caustic magnesite with additions of pyrite cinders is 60% less than the E of chrome-magnesite mortars.

N. M.

Card 2/2

17.4311

83492
S/081/60/000/013(I)/010/014
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 13(I), p. 447, # 53442

AUTHORS: Klyucharev, Ya. V., Levenshteyn, S. A.

TITLE: The Effect of the Conditions of Magnesia-Clay Spinel Synthesis on the Technical Properties of Products

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1959, No. 57, pp. 50-64

TEXT: The authors studied the effect of mineralizing additives such as CaF_2 and TiO_2 on the synthesis process and the properties of spinel refractories. Dispersion parameters (limit size of grains 60 μ, fractions below 1 μ 25-30%) are determined making the addition of 3% TiO_2 and CaF_2 sufficient to reduce the synthesis temperature to 1,450°C. It is established that TiO_2 forms Mg titanates which partially pass into solid solutions with the spinel; at about 950°C, CaO is formed from CaF_2 and bound with Al_2O_3 into aluminates. CaF_2 causes a less compact structure but a better heat resistance of the product than titanium dioxide. The method of introducing mineralizers affects the technical properties of the products: their structure is improved, mechanical strength and heat

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KLYUCHAROV, Ya.V.; CHURAKOVA, R.S.

Periclase cement and its properties. Trudy LTI no.57:65-72 '59.
(MIRA 13:8)

(Cement) (Periclase)

KLYUCHAROV, Ya.V.; CHEN' DI-TSEYAN' [Ch'en Ti-chien]

Chemical methods in the phase analysis of the system MgO - Fe_2O_3 - Cr_2O_3. Trudy LTI no.57:73-76 '59. (MIRA 13:8)
(Magnesium oxide) (Iron oxide) (Chromium oxide)

KLYUCHAROV, Ya.V.; CHEN' DI-TSZYAN' [Ch'en Ti-chien]

Phase equilibrium in the system $MgO - Cr_2O_3 - Fe_2O_3$. Zhur. neorg. khim. 5 no.12:2808-2811 D '60. (MIRA 13:12)
(Magnesium oxide) (Chromium oxide) (Iron oxide)

KLYUCHAKOV, Ya.V.; CHEN' DI-SZIZIN' [Ch'en Ti-chien]

Reaction of magnesium chromite with iron oxide and the [illegible] properties of the reaction products. Ogneupory 25 no.12:572-575 '60. (MIRA 14:1)

1. Leningradskiy tekhnologicheskiy institut im. Lenovyta (for Klyuchakov). 2. Khimiko-tekhnologicheskiy institut Vostochnogo Kitaya, Kitayskaya Narodnaya Respublika (for Chen' Di [illegible]).

(Magnesium chromite) (Iron oxide)

S/081/62/000/005/067/112
B156/B108

15.2230

AUTHORS: Klyucharov, Ya. V., Levenshteyn, S. A.

TITLE: Improvement of spinel-periclase refractories engineering

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 434-435, abstract 5K330 (Tr. Leningr. Tekhnol. in-ta im. Lensoveta, no. 52, 1961, 169-178)

TEXT: The effects of the following factors on the technical properties of spinel-bound magnesite have been investigated: the nature of the alumina and magnesite, the mineralizers used, the grain composition of the magnesite, the amount of alumina used, and the fineness of the ground spinel mixture. To make the refractories more heat-resistant it is recommended that pure "electric furnace" (80-82%) magnesite produced in a tube furnace, and alumina calcined at 1300-1400°C (8-10%) should be used; it is also recommended that the composition should be moderately coarse-grained, with <10% of 3-4 mm grains and >40% of fine fractions, and that a dry spinel mixture, moderately finely ground, with a maximum grain size of 90μ and a 10-15% content of <3μ fraction should be used. To

Card 1/2

improve density it is recommended that ~2% of TiO_2 should be used as mineraliser. [Abstracter's note: Complete translation.]

KLYUCHAROV, Ya.V.; YEGER, V.G.

Interaction of magnesite-chromite with calcium oxide. Ogneupory 28 no.3: 126-133 '63. (MIRA 16:2)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Refractory materials) (Calcium oxide)

KLYUCHAROV, Ya.V.; SKOBLO, L.I.

Aluminosilicate concrete with soluble glass. Ogneupory 29 no.6:254-258 '64. (MIRA 18:2)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.

KLYUCHAROV, Ya.V.; SKOBLO, L.I.

Aluminum phosphates $Al_2O_3 \cdot 3P_2O_5$ and the in eraction of $Al_4(P_4O_{12})_3$ with fused potassium chloride. Dokl. AN SSSR 154 no. 3:634-637 Ja '64. (MIRA 17:5)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta. Predstavleno akademikom I.V.Tananayevym.

Cont

phoric acid and material number 3 had a pasty consistency. These last two samples

ASSOCIATION: none

L 12060-66 EWP(e)/EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/WW

ACC NR: AP6001308 SOURCE CODE: UR/0363/65/001/008/1403/1409

AUTHOR: Klyucharov, Ya. V.; Suvorov, S. A.

ORG: Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologicheskiy institut)

TITLE: Formation and technical properties of solid solutions in the $MgO-Al_2O_3-Cr_2O_3$ system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 8, 1965, 1403-1409

TOPIC TAGS: magnesium oxide, aluminum oxide, chromium oxide, refractory compound, solid mechanical property, solid solution

ABSTRACT: The process of binding of magnesium oxide and the formation of solid solutions in the $MgO-Al_2O_3-Cr_2O_3$ system were studied by phase chemical, x-ray diffraction, and microscopic analyses. Three compositions $Mg(Al_{1-x}Cr_x)_2O_4$, where x = 0.2, 0.5, and 0.8, obtained from pressed and sintered oxide powder mixtures, were investigated. The following sequence of formation of solid solutions is proposed: the two spinels $MgAl_2O_4$ and $MgCr_2O_4$ are formed first, then solid solutions arise at the site of their contact. No solid solutions of Cr_2O_3 and Al_2O_3 were observed. The formation of solid solutions ends at 1400C. Thus, chromic oxide is apparently a good mineralizer in the low-temperature synthesis of $MgAl_2O_4$. The phase transformations studied appreciably affect the technical properties of the products. Thus, solid solutions of the high-alumina region of the $MgO-Al_2O_3-Cr_2O_3$ system have a high mechanical strength and sinter well. This should be considered in selecting processes

Card 1/2 UDC: 546.621'46'76

Card 2/2

ACC NR: AP7005314 SOURCE CODE: UR/0131/67/000/001/0055/0060

AUTHOR: Klyucharev, Ya.V.; ral', O.A.

ORG: Leningrad Technological Institute im. Lensovet (Leningradskiy teknologicheskiy institut)

TITLE: Technical properties of composition of the $MgO-Cr_2O_3-ZrO_2$ system

SOURCE: Ogneupory, no. 1, 1967, 55-60

TOPIC TAGS: refractory metal, compressive strength, porosity, metal deformation, magnesium oxide, chromium oxide, zirconium oxide, metal bonding

ABSTRACT:

It is well known that because of some specific properties, high-melting Mg, Cr, and Zr oxides cannot be used individually for the preparation of refractories. Refractories with desirable properties may be obtained from mixtures of preliminarily heat-treated MgO, Cr_2O_3, and ZrO_2. The main purpose of this article is to study the technical properties of compositions containing MgO in amounts enough to bond completely Cr_2O_3 into $MgCr_2O_4$ and to stabilize ZrO_2. The ultimate compression strength, apparent density, apparent porosity, temperature of deformation under stress, linear setting, and chemical stability with respect to CaO and Fe_2O_3 were determined for

Card 1/4 UDC: 666.76.001.5

ACC NR: AP7005314

seven specimens of $MgO—Cr_2O_3—ZrO_2$ refractories of different composition. The specimens were obtained by sintering mixtures of dry (at 120C) uncalcined ZrO_2, calcined (at 1300 and 1600C) MgO, and $MgCr_2O_3$. The latter was obtained by sintering mixtures of pure MgO and Cr_2O_3 at 1400 and 1750C. Composition of the refractories before and after firing are given in Table 1. Properties of the compositions are shown in Tables 2 and 3.

Table 1. Composition of specimens studied, %

No		Initial composition			Final phase composition		
Group	Specimen	Monoclinic ZrO_2	MgO	Cr_2O_3	Cubic ZrO_2	$MgCr_2O_4$	MgO
I	7	89.2	6.0	4.8	94.0	6.0	—
	9	69.2	9.4	21.3	73.0	27.0	—
	12	48.4	31.7	19.9	51.0	25.2	23.8
II	10	31.7	15.6	52.7	33.2	66.8	—
	13	15.0	29.4	55.6	15.8	70.3	13.9
	15	—	21.0	79.0	—	100.0	—
III	14	20.6	53.9	25.5	21.7	32.3	46.0

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Table. 2. Properties of the specimens after firing at 1730C

Properties	Group No. I			Group No. II			Group No. III
	Specimen No. 7	9	12	10	13	15	14
Linear setting, %	11,3	13,5	13,4	12,7	12,2	9,0	12,4
Apparent density g/cm^3. .	5,3	5,1	4,4	4,6	4,2	3,7	3,9
Ultimate compression strength kg/cm^2	4500	5000	5500	not determined	4500	not determined	4500

Analysis of the experimental data showed that dense, chemically and mechanically stable specimens of the $MgO—Cr_2O_3—ZrO_2$ system which have a high deformation temperature (above 1720C) under load (2 kg/cm^2) may be obtained from mixtures containing uncalcined ZrO_2, $MgCr_2O_4$, and MgO (calcined at 1600C) with the final firing temperature of the refractory being 1700—1750C. Group I composition with high ZrO_2 content has better

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ACC NR: AP7005314

Table 3. Properties of specimens after firing at 1750C

Properties	Group No. I			Group No. II			Group No. III	
	Specimen No. 7	9	12	10	13	15*1	14*2	14*3
Temperature of deformation under load 2 kg/cm², C	>1800	1770	1780	1740	1730	1680		1720
Linear setting, %	19,1	14,9	14,6	7,3	3,2		8,8	9,2
Apparent porosity, %	2,2	4,4	8,4	17,7	23,6	12,5	10,5	10,9
Apparent density (volume weight) g/cm³	5,2	4,7	4,3	3,9	3,4	4,5	3,7	3,6
Ultimate compression strength kg/cm²	3600	>4300	3400	3400	2500	1100	1600	2700

*1 Literature data
*2 MgO calcined of 1300C
*3 MgO calcined at 1600C

technical properties than group II and III (see Table 2). The addition of ZrO_2 to spinellide-periclase compositions increases their density and chemical stability with respect to CaO; the addition of $MgCr_2O_4$ improves their stability with respect to iron oxides. [PS]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 013/ OTH REF: 002/
ATD PRESS: 5115
Card 4/4

KLYUCHAROV, Yu.V.; SKOBLO, L.I.

Composition of the solidification products of an alumino-phosphate binding in refractory corundum mass. Zhur. prikl. khim. 38 no.3:520-526 Mr '65. (MIRA 18:11)

1. Submitted January 21, 1963.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723310008-7"

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723310008-7"

because of contamination, which made the foils brittle.) Reduction of Y_2O_3 by

L 04911-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6028716 SOURCE CODE: UR/0185/66/011/008/0924/0925

AUTHOR: Kovalenko, L. I.; Karyev, V. M.; Klyucharyev, O. P. 13 B

ORG: Physico-Technical Institute, AN UkrSSR, Khar'kov (Fizyko-tekhnichnyy instytut AN URSR)

TITLE: The production of vanadium, niobium, and tantalum foil 27 27 27 18

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 8, 1966, 924-925

TOPIC TAGS: metal foil, foil production, vanadium, niobium, tantalum, nuclear research

ABSTRACT: The aim of this work was to produce free foil of vanadium, niobium, and tantalum for nuclear and possibly other studies. A variation of the Van-Arkel method of thermal decomposition of iodides of these metals was used to produce foil of great chemical purity and uniform thickness in two stages: (1) deriving pure iodides of Va, Nb, and Ta and (2) thermal decomposition thereof to form the foil. Vanadium diiodide, niobium pentaiodide, and tantalum pentaiodide were placed in a device consisting of a vacuum chamber, crucible, crucible cover, and resistance furnace. The heated iodides were decomposed and the pure metals were deposited on the cover, the material of which has to fulfill the following conditions: (1) have a melting temperature higher than that of the iodide in question, (2) be subject only to weak iodide

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L 04911-67

ACC NR: AP6028716

diffusion at iodide decomposition temperatures, and (3) not be attacked by the same solvents as the deposited foil. A beryllium cover was used for Va; and a molybdenum cover for Nb and Ta. Foil thickness, varying from 1.2 to 12 m, was produced locally by an absorption method involving a narrow monochromatic x-ray beam. Orig. art. has: 1 table and 2 figures.

SUB CODE: 11/ 18/ SUBM DATE: 06Apr66/ ORIG REF: 007/ OTH REF: 006

Card 2/2

KLYUCHENKOV, O.A.

Production and maintenance standards for PS-1200 centrifugals.
Sakh. prom. 32 no.8:44-45 Ag '58. (MIRA 11:9)

1.Ramonskaya normativno-issledovatel'skaya laboratoriya po trudu.
(Sugar machinery)

KLYUCHNIKOV, O.A.; KULIKOV, S.K.

Change-over to the seven-hour day in the sugar industry; a discussion. Sakh.prom. 32 no.10:62-65 O '58. (MIRA 11:1)

1. Ramonskaya normativno-issledovatel'skaya laboratoriya po trudu.
(Hours of labor) (Sugar industry)

KLYUCHNIKOV, O.A.; KULIKOV, S.K.

Improvement of labor conditions and working accommodations.
Sakh. prom. 33 no.4:53-54 Ap '59. (MIRA 12:6)

1.Ramonskaya normativno-issledovatel'skaya laboratoriya po trudu.
(Sugar industry)

KLYUCHENKOV, O.A.

Mechanization of the repair of packing bags. Sakh.prom. 34 no.6: 41 Je '60. (MIRA 13:7)

1. Ramonskaya normativno-issledovatel'skaya laboratoriya po trudu.
(Sugar industry--Equipment and supplies)

KLYUCHENKOV, O.A.:

Selecting a wage system in the granulated sugar industry. Sakh. prom. 34 no. 12:51-53 D '60. (MIRA 13:12)

1. Ramonskaya NILP.
(Sugar industry) (Wages and labor productivity)

ACCESSION NR: ARA015700 S/0081/63/000/023/0470/0470

SOURCE: RZh. Khimiya, Abs. 23P76

AUTHOR: Afanas'yev, P. O.; Klyuchenkova, N. A.

TITLE: Impregnation of graphite with new synthetic resins

CITED SOURCE: Tr. Vses. n.-i. i konstrukt. in-t khim. mashinostr., vyp. 42, 1962, 67-75

TOPIC TAGS: graphite, graphite impregnation, resin, synthetic resin, polymer

ABSTRACT: Dry graphite parts were placed in an autoclave, and heated to 60C in a vacuum of 730-750 mm/Hg, which was continued for 2 hrs. without heating, after which resin was drawn into the autoclave, air was introduced under a pressure of 5-6 atm. and the pressure was maintained for 3-3.5 hrs. After that, the objects were removed, freed of the resin and again heated at 50C for 1 hr., followed by heating to 140C, increasing the heat at the rate of 10°/hr. The emulsifying resin tested was composed of liquid bakelite and vinylchloride lacquer, and furfural acetone. The treatment was repeated twice. After the treatment the objects increased in weight by 17-21%, and became impermable to water under a water pressure

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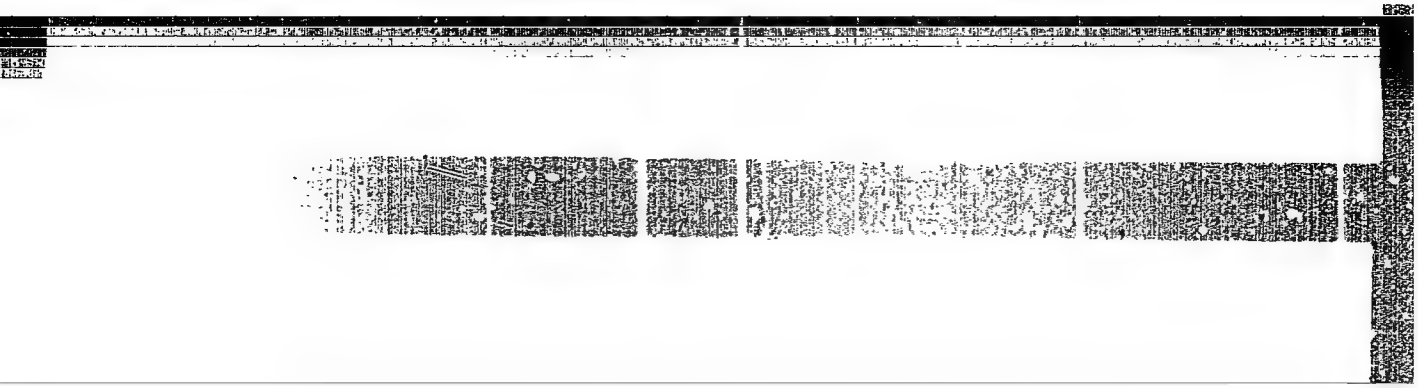
Card 2/2

KLYUCHENOVICH, S. (Gomel')

Shoe House in Gomel. Sov. torg. 35 no.5:53-54 My '62. (MIRA 15:5)

(Gomel--Shoe industry)



KLYUCHEROV, A.P.

130-8-10/20

AUTHOR: Klyucherov, A.P. and Makogonov, L.V., Engineers.

TITLE: Improved Open-hearth Furnace Ends (Usovershenstvovannyye golovki martenovskikh pechey)

PERIODICAL: Metallurg, 1957, No.8, pp. 26 - 27 (USSR).

ABSTRACT: The authors describe a design of open-hearth furnace end adopted at the Nizhniy Tagil' Metallurgical Combine in 1954 for 140-ton furnaces fired with mixed (coke-oven and blast furnace) gas. There are three air ports, two of them arched, inclined at 11° to the bath surface and situated on either side of and on the same level as the gas port, and the third above the gas port. Two 1 1/4-inch diameter tubes were provided on either side of the port for compressed-air injection, and the authors discuss briefly compressed-air injection practice at the Kuznetsk Metallurgical Combine (KMK) (through a slot under the gas port). The Kuznetsk method was less effective than that of injecting the compressed air at the sides of the port, and the latter practice was extended to Venturi furnaces (leading to a 9.5% increase in production per unit working time, compared with one of 11.5% for arch ends). The authors present comparative data on the operation of 140-ton furnaces with various types of head with compressed air injection and also for a Venturi-end furnace without the injection. The data

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AUTHORS: Klyucherov, A. P., Vydrinn, Zh. A. SOV/131-58-10-7/11

TITLE: Testing of Dinas Bricks Containing Magnesium and Manganese in the Vaults of Martin Furnaces (Ispytaniye dinasa s magnezial'no-margantsovistoy svyazkoy v svodkh martenovskikh pechey)

PERIODICAL: Ogneupory, 1958, 23, Nr 10, pp. 476-478 (USSR)

ABSTRACT: Dinas VFD, of high density and with a high silicic acid content was used in the vaults of the Martin furnaces of the Nizhne-Tagil'skiy metallurgicheskiy kombinat (Nizhniy Tagil Metallurgical Combine). Its stability proved to be higher than that of normal Dinas, as is seen from the work of G.V. Gurskiy, I.S. Kaynarskiy, A.P. Klyucherov, B.Ye. Pindrik. A process for the technical production of this material has been developed by the Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (Ukrainian Scientific Research Institute for Refractory Products). Because of the low press capacity of the Pervoural'skiy dinasovyy zavod (Pervoural'sk Dinas Works) it has not been possible to increase production sufficiently. Ural'skoye otdeleniye Leningradskogo instituta ogneuporov (Ural Branch of the Leningrad Institute for

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Testing of Dinas Bricks Containing Magnesium and Manganese in the Vaults of Martin Furnaces SOV/131-58-10-7/11

Refractory Products) recommended that the properties of the Dinas be improved by adding about 0,6 % MnO and 0,2 % MgO. The table shows the chemical composition and the physico-mechanical properties of Dinas MMU with high magnesium and manganese content in comparison with Dinas VPD and normal Dinas. The tests carried out proved that Dinas MMU and VPD are equally thermostable, but that the agglomeration of the former is inferior to that of the latter.
There are 1 table and 1 reference which is Soviet.

ASSOCIATION: Nizhne-Tagil'skiy metallurgicheskiy kombinat (Nizhniy Tagil Metallurgical Combine)

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15 (2)

S/131/60/000/02/008/014
B015/B008

AUTHORS: Klyucherov, A. P., Vydrina, Zh. A.

TITLE: Test of Periclase-forsterite Bricks in Regenerators of Martin Furnaces

PERIODICAL: Ogneupory, 1960, Nr 2, pp 85-87 (USSR)

ABSTRACT: This investigation was carried out in 1958 at the Nizhne-Tagil'skiy metallurgicheskiy kombinat (Nizhniy Tagil Metallurgical Kombinat) and is described by the authors. The Martin furnaces were heated by blast-furnace gas under the addition of oxygen. The following persons participated in the investigations: I. I. Legunov (deceased), S. N. Galakhmatov, L. P. Pologova, Ye. K. Koshevnikova, P. N. D'yachkov, and I. N. Stepanova. The bricks were produced at the "Magnezit" Works from magnesites of the Onotskoye deposit in accordance with the procedure by the Vostochnyy nauchno-issledovatel'skiy i proyektnyy institut ogneuporov (Eastern Scientific Research- and Design Institute for Refractories). The quality of the periclase-forsterite bricks is mentioned in table 1. The temperature fluctuations of the upper part of the regenerator masonry are given in table 2. The properties of the refrac-

Card 1/2

KLYUCHNIKOV, A.P.; KONDRAT'YEV, S.N.; Prinimali uchastiye: GUSAROV, F.V.; UDOVENKO, V.G.; PETROV, G.A.; BURKSER, V.Ye.; SIMONIN, I.A.; KUDRIN, Ye.A.; GALAKHMATOV, S.N.; ZIMINA, L.P.; SHISHARIN, B.N.; KONDYURINA, R.V.; BUKMISTROV, K.A.; SHIRNIN, I.A.; SIMONENKO, F.N.; GORSHILOV, Yu.V.; KOLPAKOV, B.V.; GUSAROV, A.K.; BOLOTOV, P.G.

Heat insulation of open-hearth furnace crowns. Metallurg 5 no.11: 14-17 N '60. (MIRA 13:10)

1. Nizhe-Tagil'skiy metallurgicheskiy kombinat.
(Open-hearth furnaces--Design and construction)
(Insulation (Heat))

PETROV, G.A.; KLYUCHEROV, A.P.; SHISHARIN, B.N.

Cleaning open-hearth furnace regenerator checkers. Metallurg 6 no.4:19-20 Ap '61. (MIRA 14:3)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.
(Open-hearth furnaces—Equipment and supplies)

KLYUCHEROV, Anatoliy Petrovich; KONDRAT'YEV, Sergey Nikolayevich; LEBEDEV, Aleksandr Aleksandrovich; VLASOV, Radem Vasil'yevich; LITVISHKO, V.N., insh., retsenzent; BUR'KOV, M.M., insh., red.; LEPINSKIKH, B.M., kand. tekhn. nauk, red.; KOMOL', V.P., tekhn. red.

[Work experience of Novotagil'skoye steel smelters]Opyt raboty nizhnetagil'skikh staleplavil'shchikov. Sverdlovsk, Metallurgizdat, 1963. 93 p. (MIRA 16:4)
(Novotagil'skoye--Open-hearth process)

PETROV, G.A.; KLYUCHEROV, A.P.; KONDRAT'YEV, S.N.; KORSHUNOV, V.S.; SIMONENKO, F.N.

Rapid methods of heating and fritting the hearth bottom of high capacity open-hearth furnaces. Stal' 23 no.7:611-615 Jl '63. (MIRA 16:9)

1. Nishne-Tagil'skiy metallurgicheskiy kombinat i Vostochnyy nauchno-issledovatel'skiy i proyektnyy institut ogneuporov.
(Open-hearth furnaces—Maintenance and repair)

KLYUCHEROV, A.P.; AKSEL'ROD, L.M.; GIRITSKIKH, V.F.; KLIMOV, G.M.

Improvement of thermal processes in mazut-operated open hearth furnaces. Metallurg 9 no.10:16-19 O '64 (MIRA 18:1)

DUBROV, N.F.; KITAYEV, B.I.; KOKAREV, N.I.; UDOVENKO, V.G.; KONDRAT'YEV, S.N.; ZATULOVSKAYA, Ye.Z.; KLYUCHEROV, A.P.

Review of the book by N.A.Vecher "Highly efficient operation of open-hearth furnaces." Stal' 24 no.7:613-614 Jl '64. (MIRA 18:1)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov, Ural'skiy politekhnicheskiy institut i Nizhne-Tagil'skiy metallurgicheskiy kombinat.

KLYUCHEHOV, A.P.; GIRITSKIKH, V.F.; SHISHARIN, B.N.

Accelerating the firing of open-hearth furnaces. Stal' 25 no.6:517-521 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

VYDRINA, Zh.A.; KLYUCHEROV, A.P.

Investigating efficient refractories for the checkerwork of open-hearth furnaces. Stal' 25 no.6:522-528 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

NIKULIN, L.M.; BELOV, I.V.; KONDRAT'YEV, S.N.; KLYUCHEROV, A.P.; SHISHARIN, B.N.

Cleaning the checkerwork, checker flues, and smoke flues from flue dust during the operation of an open-hearth furnace. Stal' 25 no.6:566-567 Je '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki i Nizhne-Tagil'skiy metallurgicheskiy kombinat.

VYDRINA, Zh.A.; KLYUCHEROV, A.P.; ABDULINA, M.A.; NAZARENKO, A.Ye.

Testing the crown refractories presented at the 1964 All-Union Competition. Ogneupory 30 no.7:7-15 '65. (MIRA 18:8)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat im. V.I.Lenina (for Vydrina, Klyucherov, Abdulina). 2. Gosudarstvennaya inspektsiya po sluzhbe i kachestvu ogneuporov (for Nazarenko).

KLYUCHEROVA, V.I.

USSR/Chemical Technology - Chemical Products and Their Applications - Silicates. Glass. Ceramics. Binders. I-10

Abs Jour : Ref. Zhur - Khimiya, No 3, 1957, 9076

Author : Klyucherova, V.I., and Shevelev, A.I.

Inst :

Title : Recording the Speed of Rotary Kilns at the Sukholozhsk Cement Plant.

Orig Pub : Tsement, 1956, No 3, 29

Abstract : The number of hours spent in full-and half-speed operation as well as idle time for each kiln are recorded by means of a type ES-1 electric pulse counter (produced by Giprotsement) a type DI-3 pulse emitter is used. The speed of the kiln is recorded with a type SG-3 recording millovoltmeter.

Card 1/2 Sukholozhskiy tsementnyy zavod

ABATUROV, A.I.; VINOGRADOV, M.A.; DUBROVA, G.B.; LOTOREV, L.M.; ZORIN, S.N.; VASIL'YEV, A.A.; VOLOKITIN, A.S.; BUKOVETSKIY, A.I.; PEMAZKOV, N.S.; MEZENTSEV, P.V.; YEGORKIN, N.I.; DANILOV, M.M.; LUKASHEV, M.Ya.; MEYEROVICH, I.L.; KLYUCHEV, A.Ye.; SARYCHEV, V.G.; ZAVILOVICH, M.A.; NOVOSEL'SKIY, N.M.; GITLITS, S.A.; REZNICHENKO, M.S.; MUNOZ, L.P.; KHUTAGUROVA, F.V.; CHOGOVADZE, Sh.K.; RYBCHENKO, A.A.; BOCHAROVA, N.P.; GAGLOYEVA, N.A.; KRYUKOVA, T.B.

Rubinshtein, Grigorii Leonidovich; 1891-1959. Sov. torg. 33 no.12:56 D '59. (MIRA 13:2)

(Rubinshtein, Grigorii Leonidovich, 1891-1959)

SIKOV, Alekseey Ivanovich; KLYUCHEV, Mikhail Vasil'yevich; LADYGIN, A.M., otv.red.; SHOROKHOVA, A.V., red.izd-va; NADEINSKAYA, A.A., tekhn.red.; LOMILINA, L.N., tekhn.red.

[K-56 coal combine] Ugol'nyi kombain K-56. Moskva, Ugletekhizdat, 1959. 60 p. (MIRA 12:6)

(Coal mining machinery)

KLYUCHEV, V. I.

Klyuchev, V. I. — "Design of an Asynchronous Electrodrive with Choking of Saturation and with Submagnetization of the Motor." Min Higher Education USSR, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov, Moscow, 1955 (Dissertation for Degree of Candidate of Technical Sciences).

SO: Knizhnaya Letopis', No. 23, Moscow, June, 1955, pp. 87-104.

KLYUCHEV, VI

8(0) PHASE I BOOK EXPLOITATION SOV/2347

Tolokonnikov, Leonid Stepanovich, Mikhail Mikhaylovich Sokolov, Abram Solomonovich Sandler, Vladimir Ivanovich Klyuchev, Yevgeniye Petrovich Ivanov, and Yevgeniy Nikolayevich Zimin

Atlas elektromekhanicheskikh promyshlennykh ustanovok, ch. 1. Elektroprivod i peredatochnyye mekhanizmy (Atlas of Electromechanical Industrial Installations, Pt. 1. Electric Drive and Transmission Mechanisms) Moscow, Gosenergoizdat, 1958. 140 p. 6,500 copies printed.

Chief Ed.: M.G. Chilikin; Eds. (Title page): A.T. Golovan and Leonid Stepanovich Tolokonnikov; Ed. (Inside book): A.L. Saparova; Tech. Ed.: N.I. Borunov.

PURPOSE: The atlas is intended as a manual for students working on machine parts projects and on term and diploma projects related to electrical equipment for drives.

COVERAGE: The atlas presents electromechanical installations for driving, hoisting, and transporting mechanisms (cranes, excavators, hoists, conveyers), rolling mills (continuous rolling mills), metal forming equipment, metal-cutting machine tools and automatic transfer lines. Drawings of general views of mechanisms and drives with the distribution of electrical equipment, elementary circuits and

Card 1/4

wiring diagrams with the necessary explanations are presented. The mechanical and electrical parts of every mechanism or device are closely related in the manual to enable joint treatment of the sugject and to improve the level of preparation for design. In compiling the atlas most recent design material of the following institutions was used: scientific research institutes VNIIPTMASh, TsKB "Elektroprivod," TsNIITMASh, NIIProdmash, PKO "Soyuzprom-mekhanizatsiya," GPI, Tyazhpromelektroproyekt, Institutes MEI and MISI; and Plants "Dinamo" and "Pod"yemnik." No personalities are mentioned. There are 28 references, all Soviet.

TABLE OF CONTENTS:

PART I. HOISTING AND TRANSPORTING MECHANISMS

Atlas of Electromechanical Industrial Installations (Cont.) SOV/2347

PART II. METALLURGICAL AND PRESS FORGING EQUIPMENT

Card 3/4

8(2); 18(1) PHASE I BOOK EXPLOITATION SOV/1833

Soveshchaniye po avtomatizirovannomu elektroprivodu peremennogo toka, Moscow, 1958

Trudy... (Transactions of the Conference on Automated A-C Electric Drives) Moscow, Izd-vo AN SSSR, 1958. 398 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Resp. Ed.: V.S. Bulgakov, Academician, and M.G. Chilikin, Doctor of Technical Sciences, Professor; Ed. of Publishing House: B.M. Leffa; Tech. Ed.: I.P. Kan'shin.

COVERAGE: The conference was organized on the initiative of the Institute of Automation and Telemechanics of the Academy of Sciences, USSR, and the Moscow Power Engineering Institute and had as its aim the planning of the most progressive ways of developing automatic control of electric drives. The first conference on the subject of automated electric drive took place more than 10 years before the present one and was concerned with d-c electric drives. The results of this conference were found to be most valuable in the task of rebuilding postwar Soviet industry and in furthering industrial development. Present technical development of Soviet industry demands high speeds, simplicity of construction, reliability of operation, and economy. The squirrel-cage induction motor with frequency control appears to be the most promising type of controlled a-c drive. For wide application of this drive in the Soviet economy there is a need of developing new types of frequency converters. Some interesting studies were made in this connection at the Institute of Automation and Telemechanics of the USSR Academy of Sciences and its Leningrad branch, at the Moscow Power Engineering Institute, the Central Design Bureau of the Elektroprivod Plant, the State Design Institute of the Ministry of Construction of the RSFSR, and in other design organizations. These studies were discussed at the present conference. The transactions contain material concerning the theory and design of reactor, pulse, and frequency methods of controlling a-c electric drives. Candidate of Technical Sciences I.V. Shkin and Engineer V.A. Kosarova participated in the preparation of this collection of papers. The volume was reviewed by Professor Yu. V. Mitusov, Doctor of Technical Sciences. Some of the papers include a bibliography.

TABLE OF CONTENTS:

Kirichev, V.I., Engineer. Induction Motor Electric Drive Controlled by Saturable Reactors and With Magnetization of the Rotor 312

This method proposed by the author as a theoretical solution was checked by experimental work at the Laboratory E17 of the MEI. According to the author the results justify introduction of this method in Soviet industry. No references are given.

Card 25/31

KLYUCHEV, V.I., kand.tekhn.nauk.

Universal dynamic braking characteristics for an induction motor. Elektrichestvo no.1:14-18 Ja '58. (MIRA 11:2)

1.Moskovskiy energeticheskiy institut.
(Electric motors, induction)

AUTHORS: Klyuchev, V. I., Candidate of Technical Sciences, 105-58-6-15/33
Yakovlev, V. I., Candidate of Technical Sciences

TITLE: Use of Magnetic Amplifiers for the Control of the Generator-Motor System in Electric Excavator Drives (Primeneniye magnitnykh usiliteley dlya upravleniya sistemoy generator -dvigatel' v elektroprivodakh ekskavatorov)

PERIODICAL: Elektrichestvo, 1958, Nr 6, pp. 59-63 (USSR)

ABSTRACT: In order to investigate the problem of the technical possibilities of an arrangement with a magnetic amplifier as generator exciter the technological requirements of the electric drive of an excavator are analyzed. The safeguard of the required time in the transient processes of starting, turning, and braking is most important for their favorable progress as well as the limiting of the electric-motor current during the transient processes. Because of the considerable electromagnetic inertia of the generator the guarantee of the required time by the transient processes is connected with the necessity of forcing their excitation. In the arrangement with one electrodynamic amplifier (EDA) and one magnetic intermediate amplifier (MIA) the generator excitation processes are

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forced by means of a rigid negative return coupling to the generator voltage and a limitation of current by the use of a negative connection to the armature current by cutting-off. This diagram excludes favorable characteristic properties for the electric drive of the turning. The character of the transient processes is not changed essentially by the substitution of the EDA-MIA cascade by a magnetic amplifier without changing the diagram and the return-coupling character. A diagram is shown here which renders the use of the magnetic amplifier for a direct control of the generator field in the excavator drives more expedient. The characteristic excavator properties of the electric drive are produced in this case by using the nonlinearity of the characteristic curve of the magnetic amplifier, the continuous current return coupling, and the positive voltage return coupling. In order to increase the reliability of the motor-current limitation the negative current connection is made by introducing the control winding circuit of the armature-current circuit into the current circuit. In this case the voltage drop of the control winding circuit is proportional to the armature current, and thus the number of control circuits and of control contacts is decreased, too. -From Sept-

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ember to October 1957 industrial tests of the electric drives were made in the Kounrad Mine at the excavator ЭКГ-8 (E-6) according to the diagram with EDA and MIA and to that with a magnetic amplifier. The analysis of the oscillograms proves the correctness of the results in the comparison of the investigated diagrams and shows that the system with a magnetic power amplifier guarantees higher qualitative and quantitative indices. The tests were made with all the three basic electric drives of the excavator(turning,raising,pressing) and showed analogous results. The theoretical analysis and the test results of the arrangement generator-motor with a magnetic amplifier prove the great technical possibilities of this diagram. The simplicity of this diagram and the absence of any oscillation tendency essentially simplify the adjustment.There are 5 figures and 1 Soviet reference

ASSOCIATION: Moskovskiy energeticheskiy institut(Moscow Institute of Power Engineering)

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1. Magnetic amplifiers--Performance 2. Motor generators--Control
3. Earth moving equipment--Control systems

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